

# **Biotechnologies towards Sustainable Development in Malaysia**

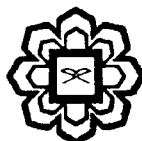
**Zarina Zainuddin**

**IUM PRESS  
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA**



# **Biotechnologies towards Sustainable Development in Malaysia**

*Zarina Zainuddin*



**IIUM Press**

Published by:  
IIUM Press  
International Islamic University Malaysia

First Edition, 2011  
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Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Zarina Zainuddin

Biotechnologies towards Sustainable Development in Malaysia

Zarina Zainuddin

Include index

Bibliography: p. 149

ISBN: 978-967-418-200-7

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM  
(Malaysian Scholarly Publishing Council)

Printed by :  
**IIUM PRINTING SDN. BHD.**  
No. 1, Jalan Industri Batu Caves 1/3  
Taman Perindustrian Batu Caves  
Batu Caves Centre Point  
68100 Batu Caves  
Selangor Darul Ehsan

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## Chapter 26

### Screening of mangrove plants for gram negative antibacterial activity

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#### **Introduction**

Mangrove ecosystems provide a unique and valuable range of resources. Mangrove plants are said to have a bright potential in pharmaceutical resources in medical world due to its richness of bioactive compounds. Plants release chemical compounds through their roots and leaves which prevent the growth of invasive plants and algae that may compete with the plants in its immediate ecosystem. This phenomenon is termed ‘allelopathy’ and is referred to any biochemical interaction among plants, including microorganisms (Rice, 1974). Chemical compounds released by plants have wide medical applications. Mangrove plants are rich in steroids, triterpenes, saponins, flavonoids, alkaloids and tannins (Bandaranayake, 1995). They are among the metabolites which are useful as medicine.

*Rhizophora* is reported as one of the popular folklore medicines. The root, leaf and stem extracts of *Rhizophora* trees have been found to inhibit the growth of various human pathogenic organisms including bacteria, fungi and viruses (Hernandez and Perez, 1978). For red mangrove trees the bark has been used to cure a wide array of diseases (Duke and Wain, 1981).